



C2 Single-Face-To-the Customer (SFTC)

46th Test Squadron, Detachment 1

MISSION: *Provide C2 Test Expertise
Through Superior Consultation
and Effective Test Execution*

DSN 478-4102

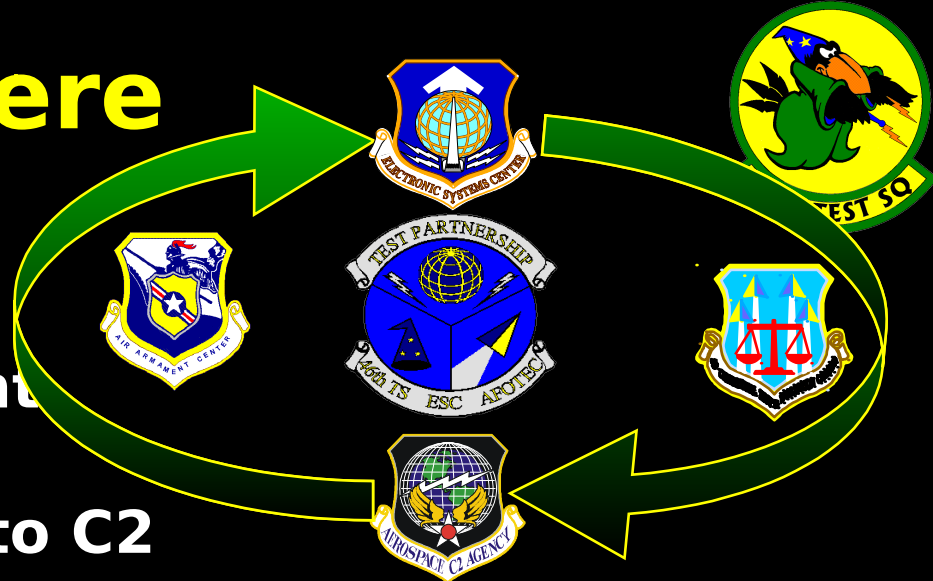
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Why We're Here at ESC

- ◆ '96 CORONA / C2 Blueprint
- ◆ HQ USAF/TE:
...bring disciplined test to C2
- ◆ HQ AFMC/DO, ESC/CC, AFOTEC/CC, AAC/CC, et al
Created ESC Test Partnership - Det Established '98
- ◆ Detachment 1: Two "Hats"
 - Single-Face-To-the Customer (SFTC) for all C2 Systems
 - » Test Consultation, Recommend Responsible Test Organizations (RTOs) and Test Strategies -- IG Hot Item
 - » Extension of the HQ AFMC/DO Staff
 - RTO: T&E Planning and Execution
- ◆ ESC Program Offices Typically Don't Develop and Retain In-House Professional Test Force--
Not Economically Viable





Organization

- **Air Armament Center (AAC)**
Center of Excellence for DT&E of C2 Systems
- **46th Test Wing (46 TW)**
- **46th Ops Group (46 OG)**
- **46th Test Squadron (46 TS)**



Capabilities

- ◆ **DT&E Experts for C2, EO, IR and MMW Systems and Sub-systems**
 - Classical: Plan, Execute, Report, OT Readiness
- ◆ **Test Management, Planning, Concept and Strategy Development**
- ◆ **C2 Acquisition Strategy Support**
 - Quick PASS, ASP, etc
- ◆ **T&E Requirements Definition**
 - MSN, ORDs, TEMP's, Charters
- ◆ **Identify T&E Resources and Needs**
 - RTOs, PTOs, Test Investment Process



What We Do

- ◆ Plan and Organize
- ◆ Coordinate Resources
- ◆ Provision
- ◆ Execute
- ◆ Report

*We are a
**Responsible
Test
Organization***

C2 Developmental Testing

*...And we are the
**Single Face To the
Customer for all Air
Force C2 Systems***



Best Practices

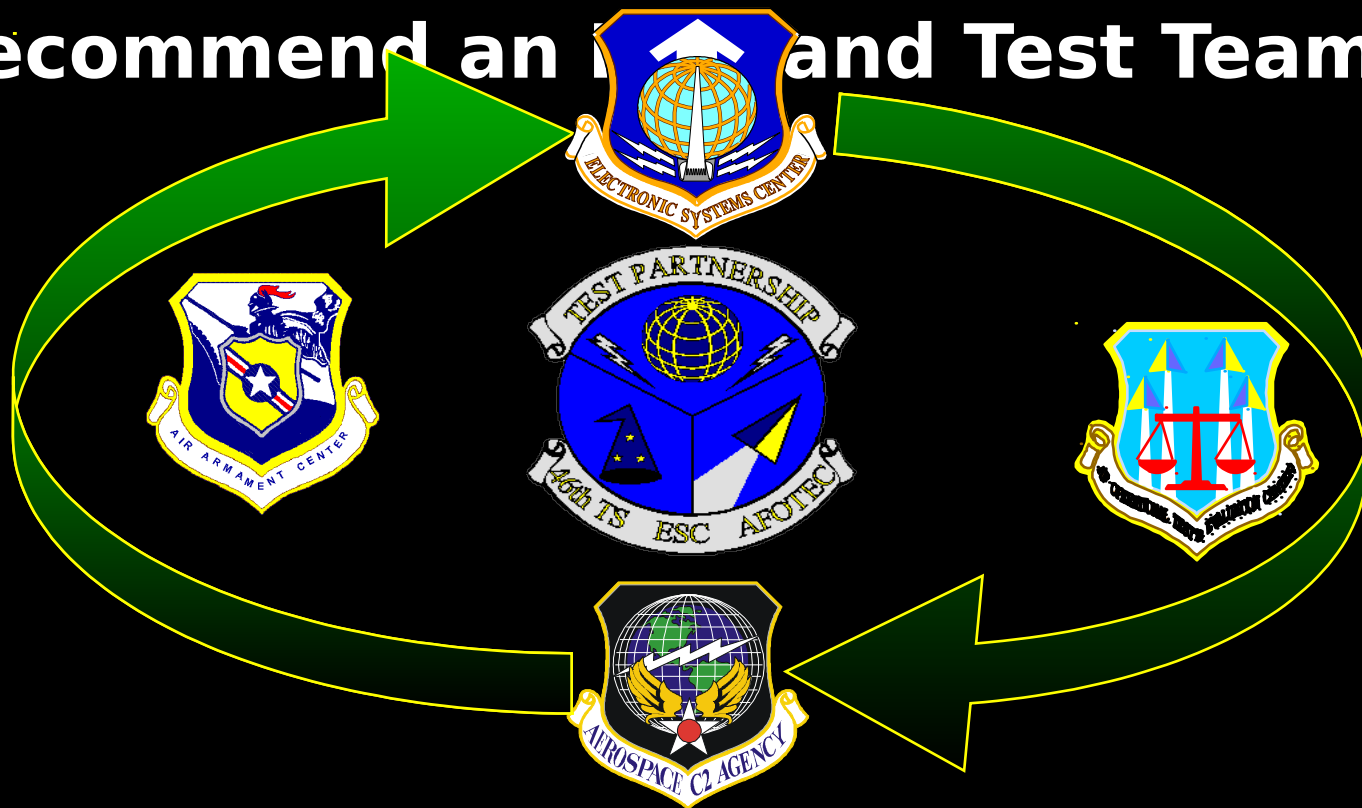
- ◆ **C2 SFTC RTO Process**
 - Questionnaire, Analysis & Recommendation
- ◆ **Experimentation & Spiral Development**
 - JEFX '98-'01; PSAB; APTX '01; KTAIP; CAOC-X
- ◆ **Test Advisors/Managers in the SPOs**
- ◆ **ESC Test Partnership Participation**
 - Early & Continuous Involvement; RTO Coord; TPSR & TPBs; Quick PASS; ASPs
 - C2 CTF Oversight Council (COG)
 - C2 GO Steering Group (GOSG)
 - C2 Test Manager's Course
 - » ESC/TE Sponsored; Tailored to ESC and C2 Systems



Single-Face-To-the Customer



- ◆ Support Test Concept Development
- ◆ Recommend Test Facilities and Resources
- ◆ Recommend an  and Test Team





Single-Face-To-the Customer



- ◆ **Support Test Concept Development**
- ◆ **Recommend Test Facilities and Resources**
- ◆ **Recommend an RTO and Test Team**

- ✓ **Large well defined programs - TBMCS**
- ✓ **Small unfunded, and undefined systems - JTRS**
- ✓ **Programs in the initial stage of development -TWR**
- ✓ **Programs up to their elbows in alligators - DCPDS**
- ✓ **Radically new programs - EFX**



Single-Face-To-the Customer



- ◆ **Support Test Concept Development**
- ◆ **Recommend Test Facilities and Resources**
- ◆ **Recommend an RTO and Test Team**

- ✓ **746TS at Holloman is expert in GPS and Y2K simulation**
- ✓ **46TS at Eglin is unmatched in C2 ops center testing**
- ✓ **ESC/Det 5 has exceptional strategic testing capabilities**
- ✓ **SSG's software factory is highly capable in standard systems testing**



Single-Face-To-the Customer



If the PMD does not designate an RTO for DT&E, the Single Manager (SM) will contact the appropriate SFTC...

The SFTC office will forward a prioritized list to the SM and HQ AFMC/DO, from which the SM will nominate an RTO and forward it to HQ AFMC/DO for approval.

- AFI 99-101

- ✓ Provide a prioritized list of professional test organizations
- ✓ Aid in **Mandatory** RTO approval with HQ AFMC/DO



A Few Misconceptions



**SPO or
Contractor can
be RTO**

**Government RTO is
mandatory, and SPO RTO
requires a waiver**

Testers slow to adapt

**We've embraced spiral
development, and fee for
service makes us lean
and mean**

We'll get in your way

**We bring the CTF in
early to get you through
the first time**



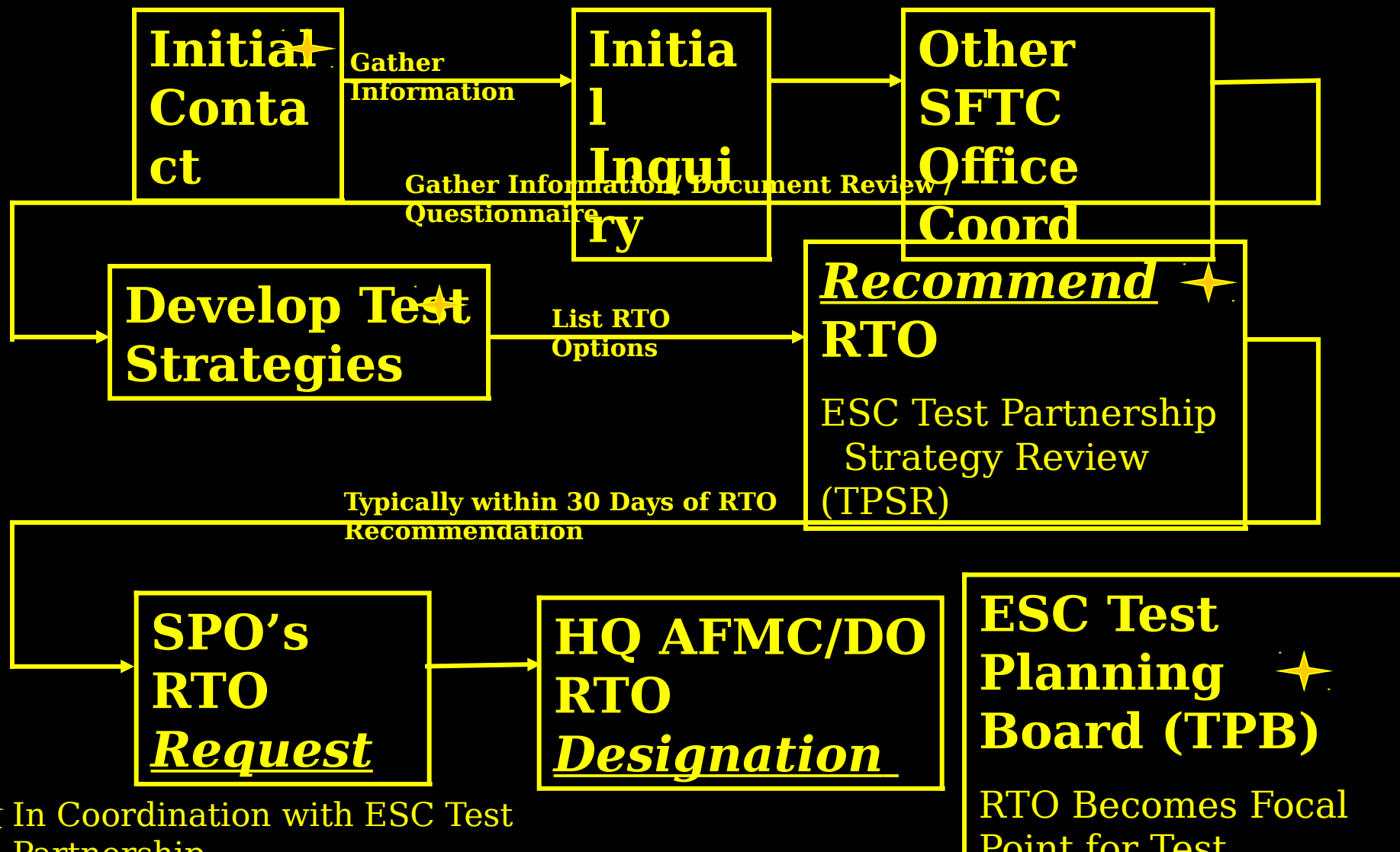
How to Obtain Support “The Process”



- ◆ Initial Contact / Inquiry - ***Give C2 SFTC (46TS/Det 1) a Call !***
- ◆ Test Request - ***Identifies What Support You Need***
- ◆ Test Program Strategy Review - ***Test Concept***
- ◆ SFTC RTO Recommendation - ***To SM and HQ AFMC/DO***
- ◆ Rough Order Magnitude (ROM) - ***Initial Cost Estimates***
- ◆ RTO Request Memo - ***Program Office to HQ AFMC/DO***
- ◆ RTO Approval Memo - ***HQ AFMC/DO Designation***
- ◆ Test Acceptance Letter - ***Record of Intent***
- ◆ Statement of Capability (SOC) - ***Execution Agreement***
- ◆ Establish JON and Test Priority - ***Funds Transferred***
- ◆ Get to Work - ***Test Planning, Execution, Reporting !***



C2 SFTC Process





The Bad News



We're Fee For Servic





So Why Pay an RTO?



People



Process



Products



So Why Pay an RTO?

◆ People - The AF's C2 Testers

- Test Expertise - It's all we do!
- Broad Resources and a Vast Knowledge Base
- Contractors Screened and Highly Trained





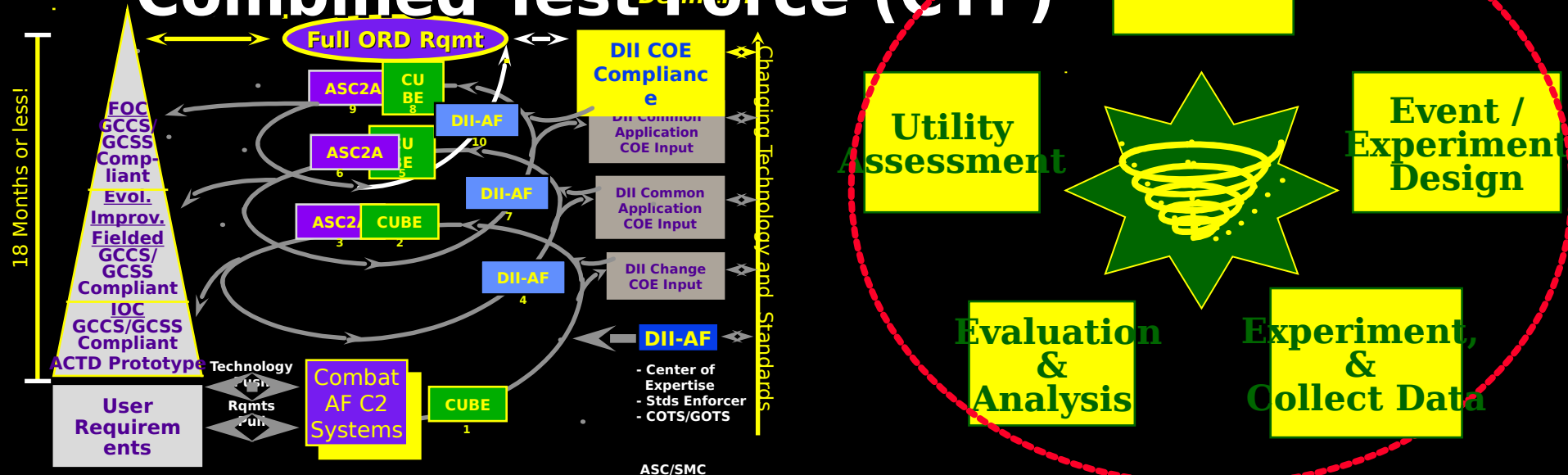
So Why Pay an RTO?

◆ Process

- We know the Acquisition Process and T&E
- We know how to Capture and Analyze Data
- We know how to Organize and Run

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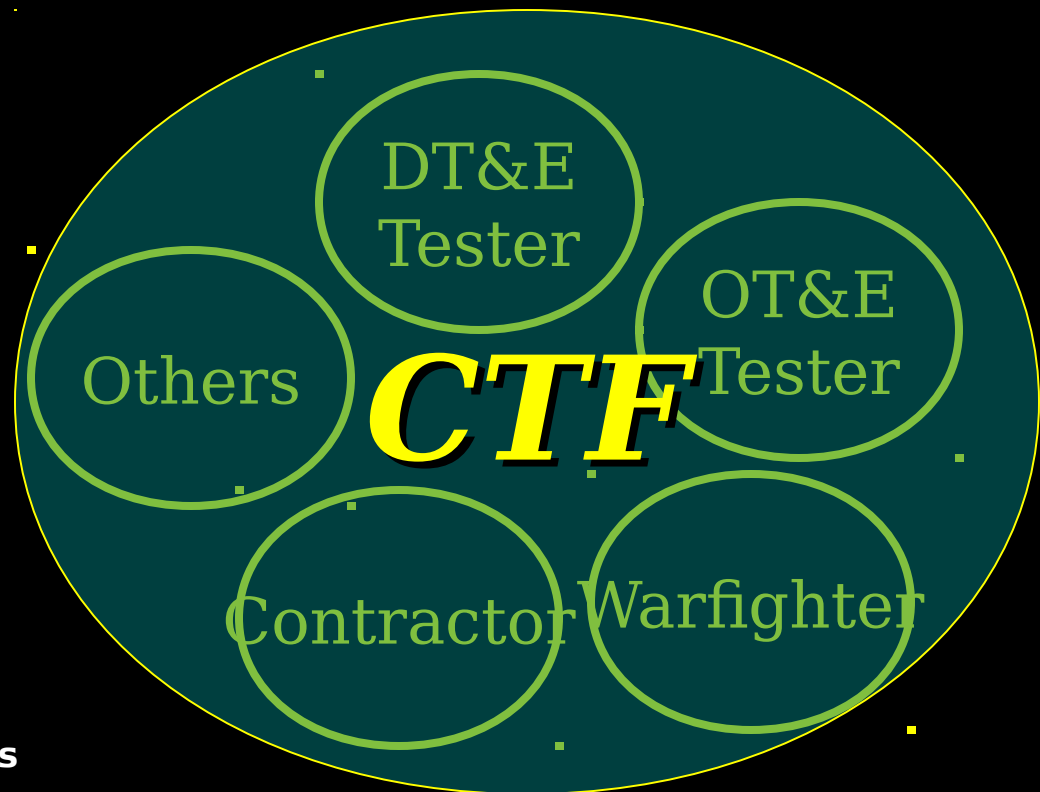
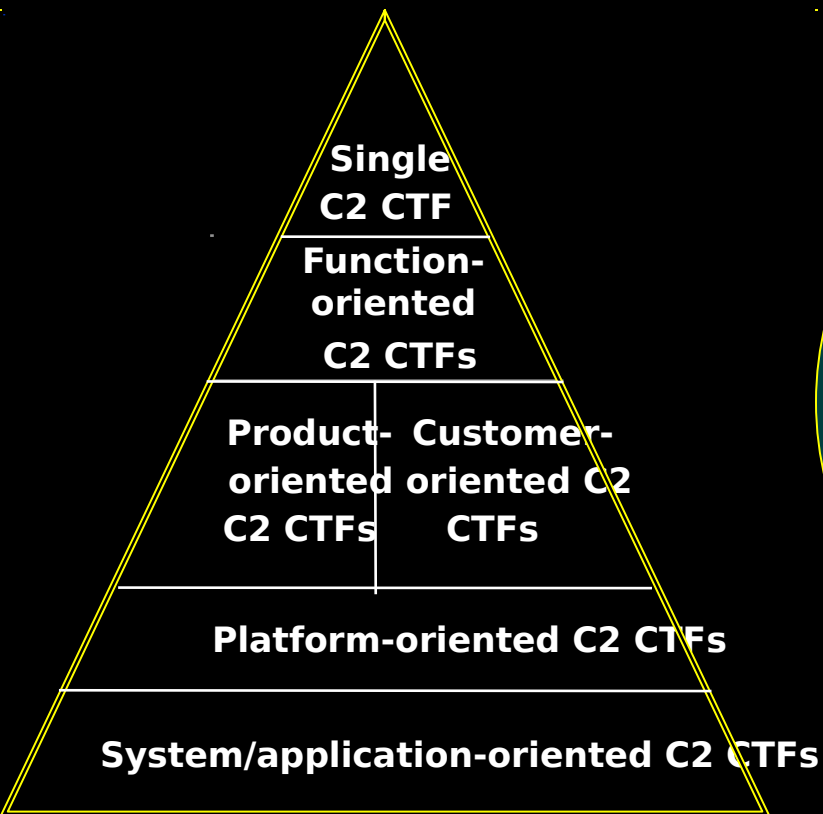
Combined Test Force (CTF)





What is a CTF?

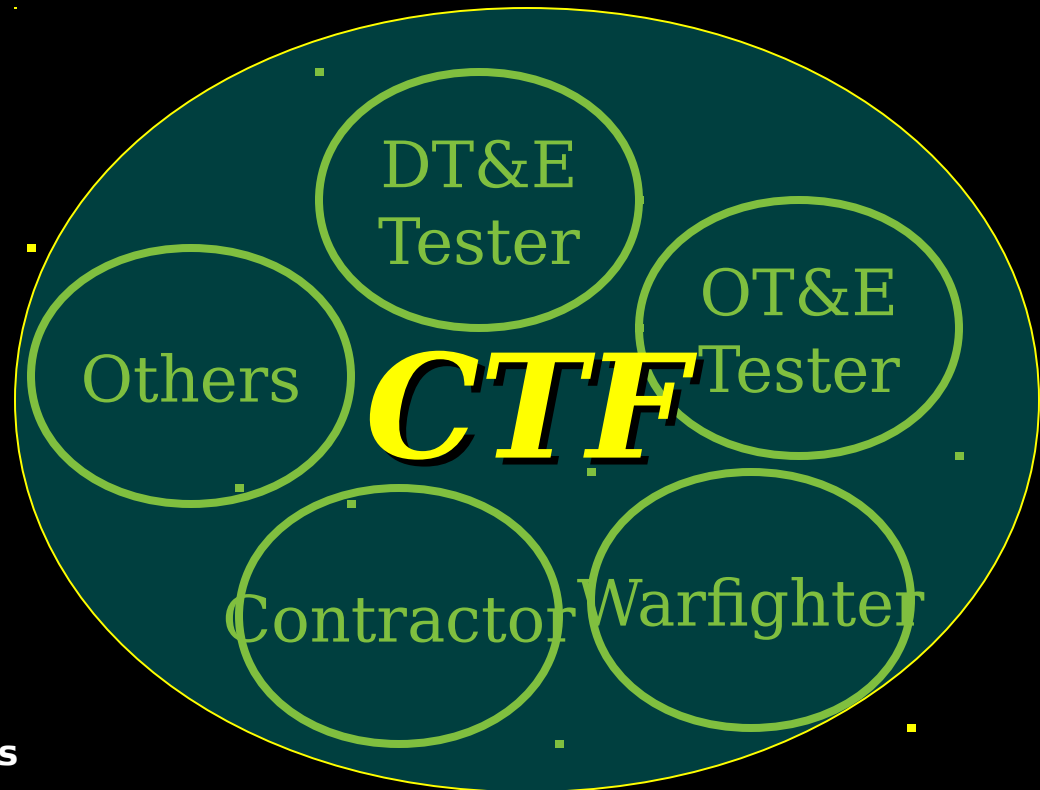
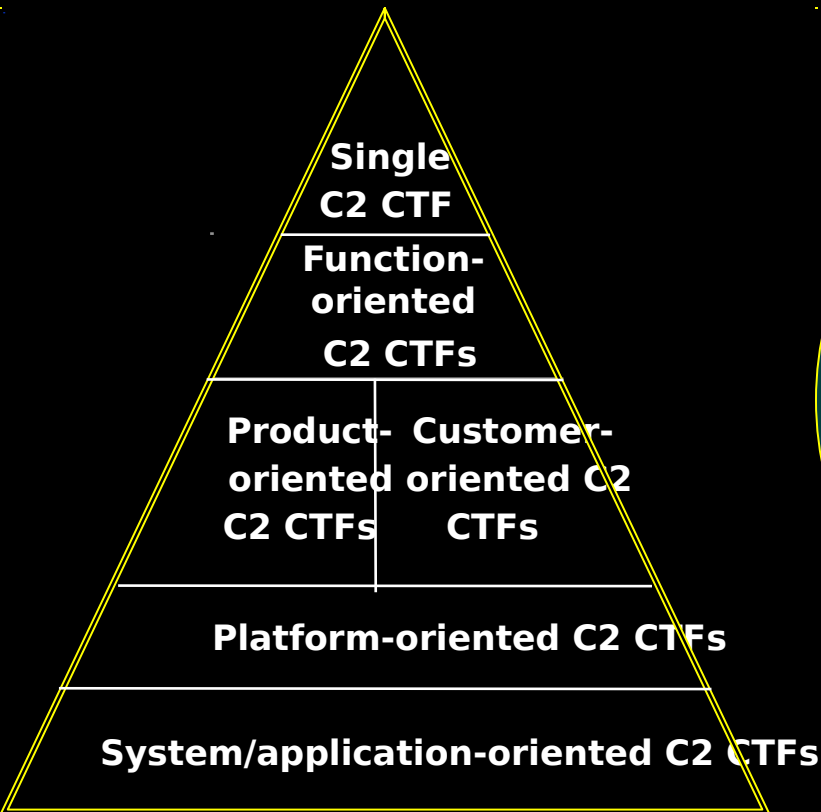
- Key Players in System Evaluation and Field
- Led by the RTO
- Involved From the Beginning of the Program





CTF Strengths

- Clear Testing Objectives, Processes, & Metrics
- Maximize Resources
- Constant Evaluation Feedback
- No Surprises

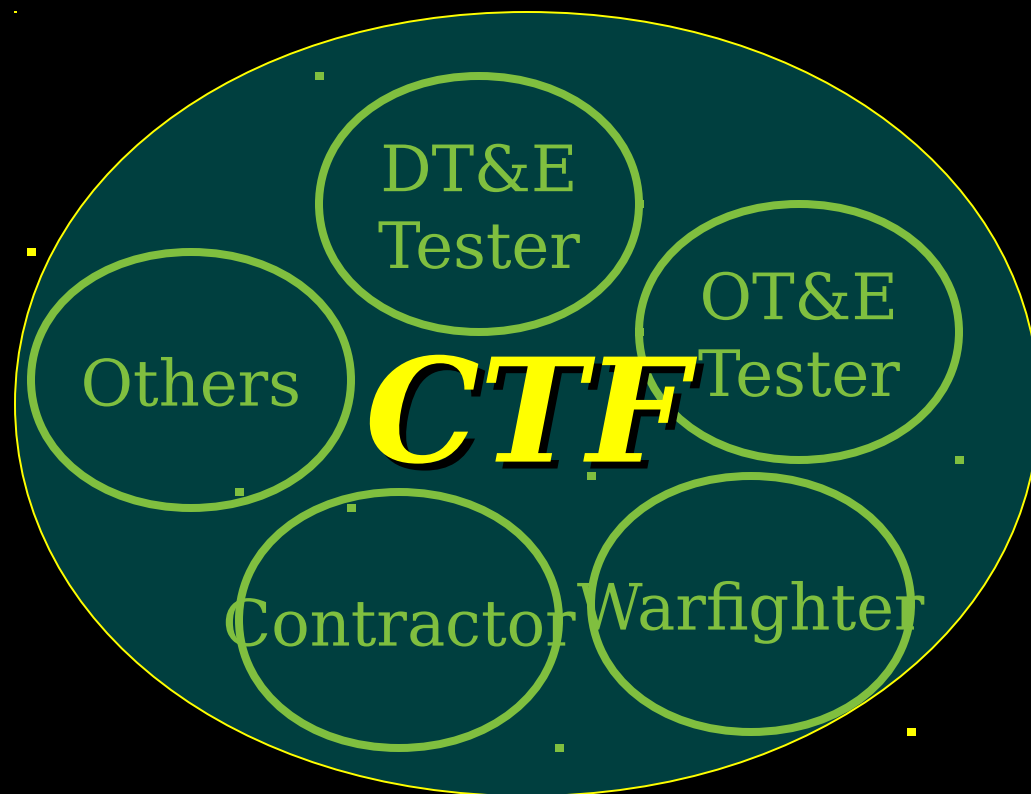




Effective in Evolutionary or Grand Development



AOC
TBMCS
AFMSS
DCGS
DCAPES
IBS
JEFX
CRC





So Why Pay an RTO?



◆Products

- Test and Evaluation Master Plan
- Test Plans and Procedures
- Formal and Informal Reports
- Assessments and Evaluations

INTERNAL DRAFT -- NOT FOR DISTRIBUTION

Review
JB

EFX Network Performance Assessment (Spiral 2)

Letter Report

Prepared by

Capt Jim Baker
Flight Commander, C4I Systems Test Flight
46th Test Squadron

EFX-98 Verification Report For Spiral Release 2.0

11 August, 1998

Prepared for:
EFX-98 SPO Building 1521
Hanscom AFB

Prepared by:
CCPL Organization
Hanscom AFB

Reviewed by:

Approved by:

JAMES H. BAKER, Captain, USAF
Flight Commander, C2 Systems Test Flight
46th Test Squadron
Date: *JB*

GREGORY JABLUNOVSKY, Captain, USAF
EFX SPO
Date:



Current Efforts



- | | | |
|---|---|---|
| <ul style="list-style-type: none">• Joint Tactical Radio System• Information Ops Planning System• Joint Precision Approach & Landing System• Mobile Approach Control System (MACS)• Airborne Broadcast Intelligence (ABI)• Wx Programs- Observing Sys 21st Century• Advance Remote Ground Unattended Sensor• C2 Information Processing System• Mobile Microwave Landing System (MMLS)• Weather Data Analysis (WDA)• Ground Multi-band Terminal (GMT)• Airborne Wideband Terminal (AWT)• B-1B Data Link Upgrade (DLU)• Combined AOC- Experiment (CAOC-X) | <ul style="list-style-type: none">• Distributed Common Ground Systems• Deliberate and Crisis Action Planning and Execution System (DCAPES)• Integrated Broadcast Service (IBS)• Military Airspace Management Sys• Tactical Air Control Party (TACP) Mod• Collaborative Tools• MCE Communications Interface Unit• AF Terminal Instrument Procedures Sys• Theater Battle Management Core Sys• Ground Theater Air Control Sys (GTACS)• Portable Flight Planning Software | |
| C2 SPOs <ul style="list-style-type: none">• DESERT SHIFT (Prince Sultan Air Base)• ESC/AC Test Advisor• Advanced Process Tech Exp (APT-X)• CRC Test Manager• Korean TADII Archit Improv Pro (KTAIP) | ISR & Infratr SPOs <ul style="list-style-type: none">• IBS Test Manager• IADS/Link 16 Test Manager | Info & Integr SPOs <ul style="list-style-type: none">• Iceland Air Defense System/Link-16• IC2 (ESC/CX) Test• Global Broadcast Service (GBS) Advisor• Time Critical Targeting (TCT) and RTG |



Conclusion

- ◆ **Effective Testing is a Key Ingredient to Successful Program Development**
- ◆ **Professional Testers Efficiently Prepare SPOs for Milestones and Certifications**
- ◆ **Use your Single Face To Customer Office**
- ◆ **We are Here to *Help!***

**Effective Testing Saves Time & Money
While Ensuring Performance!**



ESC Test Partnership

Commit to Early Test Involvement and Planning

Institutionalize Combined Testing

**ESC Focal Point For Test
(ESC/TE)**

Col [Name] [Last Name]

**AFOTEC Liaison
Lt Col T. Poole**



**AC2ISRC
Liaison
Lt Col M. Hall**

C2 DT&E Expert (46 TS, Det 1)

C2 SFTC (46 TS, Det 1)



QUIZ



- ◆ **Center of Excellence
for Acquisition of C2 Systems ??**

ACC AC2ISRC ESC AAC JITC SAF/AQ
AFOTEC C2 TIG AFRL MITRE PEO/C2

- ◆ **Center of Excellence
for DT&E of C2 Systems ??**

ACC AC2ISRC ESC AAC JITC AFFTC
AFOTEC C2 TIG AFRL MITRE SSG